

arranged so, that in use the fingers of the user will support the mobile terminal **300** in the back side of the mobile terminal and the thumbs may be used for pressing control buttons **306** located in the front side of the mobile terminal, for example, and especially the middle fingers, for instance, may be used for operating the touch pad UI input device **304**.

[0059] **FIG. 4a** illustrates an exemplary mobile terminal **400** embodying the first aspect of the second advantageous embodiment of the present invention in a perspective view, and **FIG. 4b** the same embodiment in a side view. The mobile terminal **400** is a flip-type mobile terminal construction comprising a touch pad UI input device **404** hinged to the mobile terminal **400** by a hinge **406** in a way that in a closed position as in **FIG. 4b** the touch pad UI input device **404** act as a mechanical protector for the sensitive area of the touch pad **404** and the display unit of the mobile terminal **400**.

[0060] **FIG. 5a** illustrates an exemplary mobile terminal **400** embodying the second aspect of the second advantageous embodiment of the present invention in a perspective view, and **FIG. 5b** the same embodiment in a side view, where the touch pad UI input device **404** is opened approximately to the horizontal position (position angle **403** is about 90°) relative to the mobile terminal **400**. Now the touch pad UI input device **404** may operate as an input device in laptops, whereupon when the user moves his finger towards the hinge **406** in the direction of an arrow **408** the cursor on the display **402** will advantageously move in the direction of an arrow **410**.

[0061] **FIG. 6a** illustrates an exemplary mobile terminal **400** embodying the third aspect of the second advantageous embodiment of the present invention in a perspective view, and **FIG. 6b** the same embodiment in a side view, where the touch pad UI input device **404** is completely opened (approximately 360°) relative to the mobile terminal **400**, and when the touch pad **404** locates in the back side of the mobile terminal **400**. Now the touch pad UI input device **404** may operate as a “transparent” pointing and input device, where the user may support the mobile terminal **400** with his fingers in the back side of the mobile terminal **400** and at the same time use his thumbs for pressing control buttons **412** (**FIG. 5a**), for example, and especially use his middle fingers, for instance, for operating the sensitive area of the touch pad UI input device **404** so that the user may “see” the movements of his finger on the touch pad **404** as movements of the cursor (“transparently”) on the display of the mobile terminal **400**.

[0062] Especially in this embodiment (**FIGS. 6a** and **6b**) the conversion for the direction data of the fingers movements on the touch pad UI may be made particularly in vertical direction, because if the user now moves his finger towards the hinge **406** in the direction of an arrow **414** (vertical direction), in fact he moves his finger downward (whereas in **FIGS. 5a** and **5b** he moves his finger in horizontal direction) and thereby the cursor displayed on the display would logically move also downward (whereas in **FIGS. 5a** and **5b** it moves upward). Advantageously this function may be achieved programmatically.

[0063] **FIG. 7a** illustrates movements **701** of fingers on the touch pad UI input device **704** and **FIG. 7b** the corresponding movements of the cursor or cursors **703** on the display **702** of an exemplary mobile terminal **700** according

to the present invention. In the embodiment illustrated in **FIGS. 7a** and **7b** the touch pad UI input device **704** advantageously operates as a “transparent” pointing and input device, where the user may support the mobile terminal **700** with his fingers in the back side of the mobile terminal **700** and use his thumbs for pressing control buttons **705**, for example, and especially use his middle fingers, for instance, for operating the sensitive area **704a** of the touch pad UI input device **704** so that the user may “see” the movements **701** of his finger/fingers (“transparently”) on the touch pad **704** as movements of the cursor/cursors **703** on the display **702** of the mobile terminal **700**. The cursor **703** is typically displayed on the display **702** essentially on the imaged line **706** extending from the finger on the touch pad perpendicularly through the touch pad UI **704** and display **702**.

[0064] Different kinds of menus, icons, buttons and virtual keyboard, such as qwerty-type keyboard, may be activated and displayed on the display **702** of the mobile terminal **700**, and especially when having the touch pad UI in the back side of the mobile terminal the user may make easily various choices by moving **701** his finger/fingers on the touch pad **704** so, that the cursor/cursors **703** will move onto the displayed and desired menu or button on the display **702** of the mobile terminal **700**, and then pressing the touch pad **704** by the same finger simulating a click-operation.

[0065] Further the display **702** may be divided virtually into the two or more portion, for example one portion **708a** for left hand and one portion **708b** for right hand, whereupon a user can move a cursor with his right hand finger, scroll a content displayed on the display of the mobile terminal in the direction of up/down by moving his left hand finger to the up/down or in the direction of left/right by moving his left hand finger to the left/right on the surface of the touch pad UI input device, for example. The division may be done advantageously in vertical direction (in direction of line **708**). The invention is however not restricted to this embodiment, but the division may also be done in horizontal direction, or both in horizontal and vertical direction if divided into the more than two portions, for example.

[0066] Furthermore it may be possible for the user to zoom the content of the display **702** in/out by moving his left finger on the left portion (**708a**) of the surface of the touch pad UI input device **704**, for example, and at the same time pressing the right portion (**708b**) of the touch pad UI input device **704** by a right hand finger, for example, especially when the touch pad UI is divided into the two portions (described in **FIG. 7a**). Alternatively, at the same, when the user moves his finger on the surface of the touch pad UI **704**, he can press, not the surface of the touch pad UI, but a certain button, such as a button **705** locating, for example, in the front side of a mobile terminal **700** in order to zoom the content of the display **702** in or out. The button **705** may be pressed for example by a thumb. The zoom-effect may be implemented also in embodiments of the invention although the touch pad would not be divided.

[0067] According to a further embodiment of the invention more than one cursor may be displayed on the display at the same time, but this may, however, be optional. Further it has to be noted that the embodiment illustrated in **FIGS. 7a** and **7b** may be implemented both in a monoblock-type mobile terminal construction as well in a flip-type mobile